



MS APPEAL BRIEF - PATENTS
Docket No.: 0941-0899P
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Ming YEH et al.

Application No.: 10/757,399

Confirmation No.: 4941

Filed: January 15, 2004

Art Unit: 2832

For: IGNITION COIL

Examiner: T. T. Nguyen

APPEAL BRIEF TRANSMITTAL FORM

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Transmitted herewith is an Appeal Brief on behalf of the Appellants in connection with the above-identified application.

The enclosed document is being transmitted via the Certificate of Mailing or Transmission provisions of 37 C.F.R. § 1.8.

A Notice of Appeal was filed on December 20, 2005.

The fee has been calculated as shown below:

Extension of time fee pursuant to 37 C.F.R. §§ 1.17 and 1.136(a) - \$--.

Fee for filing an Appeal Brief - \$500.00 (large entity).

Check(s) in the amount of \$500.00 is(are) attached.

Please charge Deposit Account No. 02-2448 in the amount of \$500.00. A triplicate copy of this sheet is attached.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: February 21, 2006

Respectfully submitted,

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Sir:

As required under § 41.37(a), this brief is filed after the Notice of Appeal filed in this case on December 20, 2005, and is in furtherance of said Notice of Appeal.

The fees required under § 41.20(b)(2) are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1206:

I.	Real Party In Interest
II	Related Appeals and Interferences
III.	Status of Claims
IV.	Status of Amendments
V.	Summary of Claimed Subject Matter
VI.	Grounds of Rejection to be Reviewed on Appeal
VII.	Argument
VIII.	Claims
IX.	Evidence
X.	Related Proceedings
Appendix A	Claims

I. REAL PARTY IN INTEREST

The instant application is assigned to Delta Electronics, Inc., as recorded on January 15, 2004 at Reel 014895, Frames 0151-0152. No further assignments of this application have been made.

II. RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There are 28 claims pending in application.

B. Current Status of Claims

1. Claims canceled: 4 and 20.
2. Claims withdrawn from consideration but not canceled: None.
3. Claims pending: 1-3, 5-19, and 21-30.
4. Claims allowed: None.
5. Claims rejected: 1-3, 5-19 and 21-30.

C. Claims On Appeal

The claims on appeal are claims 1-3, 5-19 and 21-30.

IV. STATUS OF AMENDMENTS

Applicant filed an Amendment After Final Rejection on November 21, 2005. The Examiner responded to the Amendment After Final Rejection in an Advisory Action mailed December 6, 2005. In the Advisory Action, the Examiner indicated that Applicants' proposed amendments to claims 1 and 17 would be entered.

Accordingly, the claims enclosed herein as Appendix A incorporate the amendments to claims 1 and 17, as indicated in the November 21, 2005 Amendment.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claims 1 and 17 are the independent claims being appealed. The subject matter defined in claims 1 and 17 relate to an ignition coil comprising a casing, a bobbin, and a plurality of pins. The bobbin includes a plurality of first terminals embedded in the body and disposed inside the casing. The pins, corresponding to the first terminals respectively, are embedded inside the casing.

Referring to one embodiment of the present invention disclosed in the specification, "Each of the first terminals 320 is provided with a ring-shaped portion 320a and a protruding portion 320b integrally formed with the ring-shaped portions 320a. Each of the ring-shaped portions 320a surrounds the corresponding pin 210 and is electrically in contact with the corresponding pin 210" (see page 6, lines 26-30). "The secondary coil 500 is connected to the protruding portion 320b of one of the first terminals 320" (see page 7, lines 15-17). In the above case, the pin 210 does not directly contact with the coil, thereby preventing attached wire breakage.

VI. GROUNDS OF OBJECTION TO BE REVIEWED ON APPEAL

- (1) Whether claims 1-3, 11-15, 17-19, 27-28 and 30 are anticipated under 35 USC 102(b) by the Applicant's Admitted Prior Art of Figs. 1a-1c (AAPA).
- (2) Whether claims 4-10, 16, 20-26 and 29 are unpatentable under 35 USC 103 by the AAPA in view of Raggi, U.S. Patent 5,179,365.

VII. ARGUMENT

- (1) Claims 1-3, 11-15, 17-19, 27-28 and 30 patently define over the AAPA.

The AAPA discloses an ignition coil 10 including a casing 20 and a bobbin 30, wherein a plurality of pins 62 of the bobbin 30 pass through holes 25 of the casing 20. Referring to Figs. 1a-1c, a first terminal is not disclosed in the AAPA.

In the Final Office Action, the Examiner stated that the AAPA discloses a bobbin 30 comprising a plurality of first terminals 62. This is not true because reference 62 represents the pins, and the first terminals are not seen in the AAPA.

Since claims 1 and 17 are not anticipated by the AAPA, claims 1 and 17 patently define over the AAPA. Since independent claims 1 and 17 overcome the rejection, the dependant claims of claims 1 and 17 also overcome the rejection.

(2) Claims 4-10, 16, 20-26 and 29 are not obvious under 35 USC 103 over the AAPA and Raggi.

Because the limitations of claims 4 and 20 have been incorporated into claims 1 and 17, the cited reference to Raggi has to be considered when traversing the rejection.

Raggi discloses a bobbin structure including winding sheet patterns 631-635, pins 611, 612, 613, 614, 616, 618 and a bobbin 601. The pins are molded into the bobbin. The winding sheet patterns have connecting holes, which place over each pins (referring to column 4, line 17-39 of the reference). That is, the first terminal is not seen in Raggi.

Raggi therefore fails to disclose a first terminal, which is embedded in the body of the bobbin. Even if, *in arguendo*, the AAPA were to be combined with Raggi, the first terminal of the present application would still not be disclosed. The Examiner's proposed combination of AAPA and Raggi would not provide all of the limitations for independent claims 1 and 17.

In addition, the objective of the present application is to prevent wire breakage. Since Raggi discloses winding sheet patterns instead of wires or coils, Raggi does not teach or suggest solutions to prevent wire breakage. Thus, there is no motivation to combine the APPA and Raggi.

As stated above, it is respectfully submitted that independent claims 1 and 17 are neither taught nor suggested by the AAPA and/or Raggi. Independent claims 1 and 17, as well as their dependent claims, are therefore allowable over the prior art utilized by the Examiner.

VIII. CLAIMS

A copy of the claims involved in the present appeal is attached hereto as Appendix A. As indicated above, the claims in Appendix A include the amendments filed by Applicant on November 21, 2005.

IX. EVIDENCE

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.

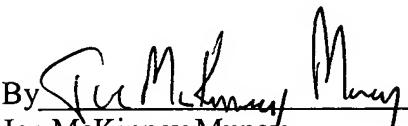
X. RELATED PROCEEDINGS

No related proceedings are referenced in II. above, or copies of decisions in related proceedings are not provided, hence no Appendix is included.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: February 21, 2006

Respectfully submitted,

By 
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APPENDIX A

Claims Involved in the Appeal of Application Serial No. 10/757,399

1. (Previously Presented) An ignition coil comprising:

a casing; and

a bobbin, including a body and a plurality of first terminals embedded in the body, disposed inside the casing, wherein the body and the casing simultaneously abut each of the first terminals so that each of the first terminals is maintained in a predetermined position on the body;

a plurality of pins, corresponding to the first terminals respectively, embedded inside the casing.

2. (Original) The ignition coil as claimed in claim 1, wherein the bobbin is formed with a plurality of concave portions for receiving the first terminals therein.

3. (Original) The ignition coil as claimed in claim 2, wherein the bobbin is formed with a plurality of protrusions for holding the first terminals therein, and each concave portion is formed at one of the protrusions respectively.

4. (Canceled)

5. (Original) The ignition coil as claimed in claim 4, wherein each of the first terminals includes a ring-shaped portion in contact with the corresponding pin.

6. (Original) The ignition coil as claimed in claim 5, wherein each ring-shaped portion is abutted by the body and the casing respectively.

7. (Original) The ignition coil as claimed in claim 5, wherein each of the pins is surrounded by the corresponding ring-shaped portion to contact the corresponding first terminal.

8. (Original) The ignition coil as claimed in claim 5, wherein each of the first terminals further includes a protruding portion integrally formed with the ring-shaped portion.

9. (Original) The ignition coil as claimed in claim 5, wherein the casing is provided with a base in which the pins are disposed, and each ring-shaped portion is abutted by the base.

10. (Original) The ignition coil as claimed in claim 9, wherein the base is formed with a plurality of supporting portions to be abutted by the ring-shaped portions.

11. (Original) The ignition coil as claimed in claim 1, wherein the bobbin further includes a primary portion and a secondary portion.

12. (Original) The ignition coil as claimed in claim 11, further comprising:
a primary coil surrounding the primary portion; and
a secondary coil, surrounding the secondary portion, connected to the first terminals.

13. (Original) The ignition coil as claimed in claim 12, wherein the bobbin further comprises:
two second terminals, connected to the primary coil, embedded in the body.

14. (Original) The ignition coil as claimed in claim 1, further comprising:
a core disposed inside the bobbin.

15. (Original) The ignition coil as claimed in claim 1, wherein the casing is made of
plastic.

16. (Previously Presented) The ignition coil as claimed in claim 4, wherein each of the
pins is made of metal.

17. (Previously Presented) An ignition coil comprising:
a casing;
a bobbin including a body, a plurality of first terminals embedded in the body, and two
second terminals embedded in the body, wherein the bobbin is disposed inside the casing, and
the body and the casing simultaneously abut each of the first terminals so that each of the first
terminals is maintained in a predetermined position on the body;
a primary coil, surrounding the body of the bobbin, connected to the second terminals;
a secondary coil, surrounding the body of the bobbin, connected to the first terminals; and
a core disposed inside the bobbin;
a plurality of pins, corresponding to the first terminals respectively, embedded inside the
casing.

18. (Original) The ignition coil as claimed in claim 17, wherein the bobbin is formed with
a plurality of concave portions for receiving the first terminals therein.

19. (Original) The ignition coil as claimed in claim 18, wherein the bobbin is formed with a plurality of protrusions for holding the first terminals therein, and each of the concave portions is formed at one of the protrusions respectively.

20. (Canceled)

21. (Original) The ignition coil as claimed in claim 20, wherein each of the first terminals includes a ring-shaped portion contacting each corresponding pin.

22. (Original) The ignition coil as claimed in claim 21, wherein each ring-shaped portion is abutted by the body and the casing respectively.

23. (Original) The ignition coil as claimed in claim 21, wherein each pin is surrounded by the corresponding ring-shaped portion to contact each corresponding first terminal.

24. (Original) The ignition coil as claimed in claim 21, wherein each first terminal further includes a protruding portion integrally formed with the ring-shaped portion.

25. (Original) The ignition coil as claimed in claim 21, wherein the casing is provided with a base in which the pins are disposed, and each ring-shaped portion is abutted by the base.

26. (Original) The ignition coil as claimed in claim 25, wherein the base is formed with a plurality of supporting portions to be abutted by the ring-shaped portions.

27. (Original) The ignition coil as claimed in claim 17, wherein the bobbin further comprises:

a primary portion surrounded by the primary coil; and
a secondary portion surrounded by the secondary coil.

28. (Original) The ignition coil as claimed in claim 17, wherein the casing is made of plastic.

29. (Previously Presented) The ignition coil as claimed in claim 20, wherein each of the pins is made of metal.

30. (Original) The ignition coil as claimed in claim 17, wherein the bobbin further comprises:

two second terminals, connected to the primary coil, embedded in the body.